UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,874	10/28/2003	Roberto Polakiewicz	CST-209	3986

7590 08/07/2008

Roberto Polakiewicz, Ph.D.
Chief Scientific Officer
CELL SIGNALING TECHNOLOGY, INC.
3 Trask Lane
Danvers, MA 01923

EXAMINER	
EWOLDT, GERALD R	
ART UNIT	PAPER NUMBER
1644	

MAIL DATE	DELIVERY MODE
08/07/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/694,874	POLAKIEWICZ ET AL.	
	Examiner	Art Unit	
	G. R. Ewoldt, Ph.D.	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *5/2/08* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-9,11-15 and 17-38* is/are pending in the application.

4a) Of the above claim(s) *6-9 and 11-15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment and remarks, filed 5/02/08 are acknowledged.

2. In view of the amendments the previous rejections under 35 U.S.C. 112, second paragraph, have been withdrawn.

3. Claims 6-9, and 11-15 stand withdrawn from further consideration by the Examiner, under 37 C.F.R. § 1.142(b) as being drawn to nonelected inventions.

Claims 17-38 are being acted upon.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 17-33 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,593,678.

As set forth previously, the '678 patent teaches a polyclonal antibody that would bind SEQ ID NOs:1-4 when phosphorylated but not when unphosphorylated (see particularly column 10, lines 62-65).

Applicant's arguments, filed 5/02/08, have been fully considered but are not found persuasive. Applicant argues that the reference cannot anticipate the claimed invention because it does not teach SEQ ID NOS:1-4 nor insulin receptor substrates 1/2.

Applicant is advised that a careful reading of the claims reveals that the claims are *only* limited to antibodies that bind insulin receptor substrates 1/2 when phosphorylated at a specific serine, but not when not phosphorylated at a specific serine. As written, the claimed antibody need not be specific for insulin receptor substrates 1/2. Accordingly, the antibody of the reference meets the limitations of the claims, i.e., that the antibody bind the phosphorylated serines. The fact that the antibody binds *all* phosphorylated serines is irrelevant.

6. Claims 17-32 and 34 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,807,702.

As set forth previously, the '702 patent teaches a monoclonal antibody that would bind SEQ ID NOs:1-4 when phosphorylated but not when unphosphorylated (see particularly column 13, lines 45-47).

See Section 5 above for Applicant's remarks and the response.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 36-38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,593,678 or U.S. Patent No. 5,807,702, in view of U.S. Patent 4,208,479.

As set forth previously, the '678 and '702 patents have been discussed previously.

The claimed invention differs from the prior art by the teaching of placing the antibodies in a kit.

The '479 patent teaches that kits allow for substantial convenience in performing assays (see column 22, in particular). Therefore, one of ordinary skill in the art at the time the invention was made would have been motivated to provide the claimed antibodies in a kit, since kits allow for substantial convenience in performing assays (column 22, in particular).

See Section 5 above for Applicant's remarks and the response.

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claim 38 stands rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, it is unlikely that the antibodies of the kit can be used to detect PKC theta activity in a biological sample as claimed without undue experimentation.

As set forth previously, a review of the claim shows that it encompasses a kit comprising *any* antibody that would bind a phosphorylated serine in *any* protein. Given the limited disclosure of the specification, it is unclear how the detection of *any* phosphoserine could be used to detect PKC theta activity.

Accordingly, in view of the quantity of experimentation necessary, the lack of sufficient guidance in the specification, the lack of sufficient working examples, i.e., the specification discloses no data demonstrating that the claimed antibodies could be use as claimed, the unpredictability of the art, and particularly the breadth of the claim, it would take undue trials and errors to practice the claimed invention.

Applicant's arguments, filed 5/02/08, have been fully considered but are not found persuasive. Applicant argues that the specification is fully enabled.

As set forth in the rejection, the specification does not establish that *any* antibody the binds phosph-IRS-1/2 can function in the claimed method. Indeed, as amended the claims are now broader than they were previously in that they now encompass the use of *any* antibody that binds phospho-IRS-1/2, including antibodies that do not recognize the phosphorylation state but rather simply recognize *any* epitope on the proteins.

11. Claim 38 stands rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter written description rejection.

As set forth previously, the specification and the claims as originally filed do not provide support for the invention as now claimed, specifically, a kit comprising the antibody of Claim 25 or 29.

Applicant cites page 30 of the specification. A review of the cite reveals support only for kits comprising the antibodies of Claims 17 and 21.

Applicant now cites paragraphs [0075-0077] in support of the claimed kit.

First note that the specification as filed does not comprise numbered paragraphs. Thus, it is difficult to establish what part of the disclosure is being cited by Applicant. A review of the specification reveals at page 31-32 kits comprising only antibodies that bind IRS-1/2 when phosphorylated at Ser 1101 (IRS-1) or Ser 1149 (IRS 2).

12. The following are new grounds for rejection.

13. Claims 17-32, 34, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by the Sigma Catalog (1998).

The Sigma Catalog teaches a monoclonal antibody that would bind SEQ ID NOS:1-4 when phosphorylated but not when unphosphorylated (P 3430). Thus, the antibody would bind IRS-1/2 when phosphorylated at Ser 1101 (IRS-1) or Ser 1149 (IRS 2). The reference further teaches the hybridoma (clone PSR-45) that produces the antibody (see particularly page 1308).

14. No claim is allowed.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Gerald Ewoldt whose telephone number is (571) 272-0843. The examiner can normally be reached Monday through Thursday from 7:30 am to 5:30 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen O'Hara, Ph.D. can be reached on (571) 272-0878.

16. **Please Note:** Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

/G.R. Ewoldt/
G.R. Ewoldt, Ph.D.
Primary Examiner
Technology Center 1600